

ABSTRACT OF THE DISCLOSURE

There is provided a motor-driven system which realizes an optimum driving mode for an electric automobile, a robot carrier car, a drum of a copying machine, etc., and a motor-driven system having a function as an optimum actuator for such driving. In a rotational electric machine provided with a stator and an outer rotor type permanent magnet rotor, the stator having an annular magnetic substance, main poles provided so as to extend radially outward from the annular magnetic substance, windings wound on the main poles respectively, and inductors each constituted by a plurality of magnetic teeth formed at a forward end of corresponding one of the main poles, the rotor having north (N) and south (S) magnetic poles arranged alternately on an inner circumference of the rotor and in a rotating direction of the rotor, the stator and the rotor being in opposition to each other while an air gap is held therebetween, there is provided a motor-driven system in which an outer rotating body such as a tire, a drum, a table or the like is mounted on an outer circumferential portion or on a side portion of the rotor.